



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,044	04/09/2007	Alfredo Larrea Napal	67341-2664PUS1; 02MRA0313	9498
26/096 7590 01/16/2009 CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009				
EXAMINER				
LUKS, JEREMY AUSTIN				
ART UNIT		PAPER NUMBER		
2837				
MAIL DATE		DELIVERY MODE		
01/16/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/576,044

**Applicant(s)**

LARREA NAPAL ET AL.

**Examiner**

JEREMY LUKS

**Art Unit**

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 13, 17 and 21 are objected to because they claim material DIN 1.4133, which appears to refer to the German Institute for Standardization (Deutsches Institut für Normung (DIN)), which is not a U.S. standard of measurement. Applicant is required to provide an equivalent standard of measurement that is recognized in the U.S., and amend the claims and Specification to reflect the U.S. equivalent standard. It does appear that DIN 1.4133 is a measurement relating to the material's anti-corrosive properties, and the Examiner will broadly interpret it as such. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5, 6, 8, 9, 11 and 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (JP 03267519) in view of Stuart (6,430,921).

With respect to Claims 1-3 and 5, Ito teaches an internal combustion engine exhaust component (Figure 1, #1) comprising: a shell (2) having an outer surface (seen in Figures 1 and 3) and an inner surface (seen in Figures 1 and 3) and defining a chamber (2a), wherein the inner surface of the shell (2) has a first part susceptible to

exhaust condensate contact (would be the bottom, lowermost portion of inner surface of muffler shell, due to gravity) and a second part not susceptible to the exhaust condensate contact (would be the upper portion of the muffler, where condensate is not likely to pool due to gravity); and a lining (12) applied over the first part (lowermost portion) of the inner surface of the shell (2) to protect the first part from the exhaust condensate contact (See abstract). Ito fails to teach wherein the lining is applied over only the first part of the inner surface of the shell to protect the first part from the exhaust condensate contact; wherein the lining covers approximately one-third to one-half of a surface area of the inner surface of the shell; and determining a part of the inner surface of the shell which will be contacted by condensates when in operation. Stuart teaches wherein it is known to apply an anti-corrosive lining (Figure 2, #1919) over only the first part (22) of the inner surface of a shell (10) to protect the first part (22) susceptible to exhaust condensate contact from the exhaust condensate contact (Col. 4, Lines 19-35); and wherein the lining (Figure 2, #19) covers approximately one-third to one-half of a surface area of the inner surface of the shell (10) (Figure 2 show liner #19 covering approximately one-third to one-half of a surface area of the inner surface of the shell); and further, determining a part (could be #22) of the inner surface of the shell (10) which will be contacted by condensates when in operation (Col. 4, Lines 19-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Ito, with the apparatus of Stuart to provide an anti-corrosive lining only at the portion(s) where condensate might pool or contact, which is likely a lower surface (Stuart (Col. 4, Lines 19-35). This combination will inherently reduce

production cost of Ito's device, because the amount of titanium needed for anti-corrosive layer #12 will be drastically reduced. Further, it has been held that omission of an element (i.e. portions of anti corrosive lining located in the second part of the shell) and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. In re Karlson, 136 USPQ 184. Further, Stuart provides a teaching for doing so. Still further, the claimed method steps are necessitated by the product structure.

With respect to Claim 6, Ito teaches the steps of providing a substantially flat sheet of material (Figures 1-3, #1), applying the lining (12) to the substantially flat sheet of material (11) and then forming the substantially flat sheet of material (1) into a shape of the shell (2) (See Figure 3 – flat sheet material #11, covered with lining #12 is rolled in to a shell #2).

With respect to Claims 8, 9 and 11, Ito teaches wherein the shell (2) has a shell thickness (see thickness of #11) and the lining (12) has a lining thickness, and the shell thickness (see thickness of #11) is thicker than the lining (12) thickness.

With respect to Claims 13, 17 and 21, Ito teaches an anticorrosive titanium lining (12, 21) (See abstract). As objected to above, and in the broadest interpretation of the meaning of "a material DIN 1.4133", the Examiner considers to lining of Ito to be equivalent to material DIN 1.4133 (12, 21) because of its anti-corrosive properties (see abstract).

With respect to Claims 14, 18 and 22, Ito teaches wherein the lining (12, 21) is a metal (see abstract).

With respect to Claims 15, 19 and 23, Ito teaches wherein the lining (12) prevents the exhaust condensate from contacting the first part (could be lowermost inner surface of shell) of the inner surface of the shell (2) (see abstract).

With respect to Claims 16, 20 and 24, Ito teaches a lining (12). Ito and Stuart fail to explicitly teach wherein the lining has a thickness of 0.5 mm. It would have been an obvious design choice to provide wherein the lining has a thickness of 0.5 mm, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

3. Claims 4, 7, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito (JP 03267519) in view of Stuart (6,430,921), as applied to Claims 1, 5 and 3, and further in view of Cullen (4,947,957).

With respect to Claims 4, 7 and 10, Ito is relied upon for the reasons and disclosures set forth above. Ito further teaches a metallic lining (12) applied over a portion of the inner surface of the shell (2). Ito and Stuart fail to teach wherein the lining is applied to the shell by spot welding. Cullen teaches applying a lining (Figure 4, #10) to a surface (14) within an exhaust component by spot welding (39) (Col. 3, Lines 3-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Ito as modified, with the apparatus of Cullen to provide a well known, stable method of attaching components within an exhaust structure. KSR International Co. v. Teleflex Inc., 82 USPQ 2d 1385 (2007). Further (with respect to claims 4 and 10), the method of forming a device is not germane to the issue of

patentability of the device itself. Therefore, this limitation has been given little patentable weight.

With respect to Claims 12, Ito teaches a method of making an internal combustion engine exhaust component (Figure 1, #1), the method comprising the steps of: providing a shell (Figures 1, 3 and 5, #2) having an outer surface and an inner surface (clearly seen in Figures 1, 3 and 5) and defining a chamber (2a); applying a lining (12) to a part of the inner surface of the shell (2) which will be contacted by the exhaust condensate; and providing a substantially flat sheet of material (Figures 2a-3 and 5, #11), applying the lining (12) to the substantially flat sheet of material (11), and then forming the substantially flat sheet of material (11) into a shape of the shell (2) (See Figure 3). Ito fails to teach determining a part of the inner surface of the shell which will be contacted by exhaust condensate when in operation; applying with spot welding a lining to only the part of the inner surface of the shell which will be contacted by the exhaust condensate. Stuart teaches determining a part (could be #22) of an inner surface of a shell (10) which will be contacted by condensates when in operation (Col. 4, Lines 19-35); and apply an anti-corrosive lining (Figure 2, #1919) over only the part of the inner surface of a shell (10) which will be contacted by the exhaust condensate (Col. 4, Lines 19-35). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Ito as modified, with the apparatus of Stuart to provide an anti-corrosive lining only at a portion(s) where condensate might pool or contact, which is likely a lower surface (Stuart (Col. 4, Lines 19-35). This combination will inherently reduce production cost of Ito's device, because

the amount of titanium needed for anti-corrosive layer #12 will be drastically reduced. Cullen teaches applying a lining (Figure 4, #10) to a surface (14) within an exhaust component by spot welding (39) (Col. 3, Lines 3-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the apparatus of Ito, with the apparatus of Cullen to provide a well known, stable method of attaching components within an exhaust structure. *KSR International Co. v. Teleflex Inc.*, 82 USPQ 2d 1385 (2007).

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection. The Examiner considers the obvious combination of Ito, Stuart and Cullen to teach all of the limitations as claimed by Applicant.
5. Regarding Claims 6 and 12, Ito, Figure 3 clearly shows a shell formed by rolling the flat sheet seen in Figure 2A. Further evidence of obviousness is seen in Figure 5, where end plate #3 is attached to shell #2 by rolling flat portions of the sheets together.
6. Regarding Claims 4, 7, 10 and 12, Applicant's argument is moot, because the combination of Ito, Stuart and Cullen suggests spot welding a connection of Ito's metallic layer #12 to the steel base material of shell #2. Stuart has been relied upon solely for teaching a placement or orientation of an anti-corrosive lining within a muffler, not for the physical characteristics of the material beyond its ability to reduce corrosion.



***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent arts of record relating to internal combustion engine exhaust components and a method of making an internal combustion engine exhaust component are disclosed in the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy Luks whose telephone number is (571) 272-2707. The examiner can normally be reached on Monday-Thursday 8:30-6:00, and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571) 272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/576,044

Page 9

Art Unit: 2837

/Jeremy Luks/

Examiner, Art Unit 2837

/Jeffrey Donels/

Primary Examiner, Art Unit 2837